



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,569	11/12/2003	Iqbal Ahmed	5003073-034US1	6659
29737	7590	02/09/2007	EXAMINER	
SMITH MOORE LLP P.O. BOX 21927 GREENSBORO, NC 27420			LEE, RIP A	
			ART UNIT	PAPER NUMBER
			1713	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/706,569	AHMED ET AL.	
	Examiner	Art Unit	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 December 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 3-6, 8-11, 13-15, and 17-19 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3-6,8-11,13-15 and 17-19 is/are rejected.
- 7) Claim(s) 13 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

This office action follows a response filed on December 11, 2006. Claims 1, 3-6, 8-11, 13-15, and 17-19 were amended. Claims 7, 12, and 16 were canceled. Claims 1, 3-6, 8-11, 13-15, and 17-19 are pending.

Claim Objections

1. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of previous claim 10. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 10 and 13 recite the same limitation of delayed free water absorption.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 3-6, 8-11, 13-15, and 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There appears to be no written description in the instant application where coatings must be free of organic solvent.

[†] *Ex Parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). Any claim containing a negative limitation which does not have basis in the original disclosure are rejected under 35 U.S.C. 112, first paragraph for failing to comply with the written description requirement. See MPEP § 2173.05(i).

Claim Rejections - 35 USC § 102 / 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 4-6, 8, and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ganslaw *et al.* (U.S. 4,043,952).

Ganslaw *et al.* discloses surface treatment of superabsorbent particles with a solution of polyvalent metal ion (example II, table I, entries 1-16). Additional examples using commercially available superabsorbent particles are shown as entries 19, 21, 23, and 25. The polymer of entries 1-16 contains 2 wt % internal crosslinking agent and it has been neutralized (table, column 12: 100 pw of acrylic acid / 2 pw of Al(OAc)₃ / 50 of pw KOH). After modification of particles, the produce is separated from dispersing medium and dried (col. 10, lines 28-30). As such, the product would contain a coating free of organic solvent.

The reference is silent with regard to the properties recited in the instant claims, however, in view of the fact that the material is essentially the same as that described in the instant claims, and in light of the fact that there is a reduction in the rate of absorption of fluid at the surface of the superabsorbent particle (col. 11, line 10), a reasonable basis exists to believe that the material exhibits the essentially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ganslaw *et al.*

The discussion of the disclosures of the prior art from the previous paragraph of this office action is incorporated here by reference. The cited examples show use of aluminum acetate as the source of aluminum ion, however, it would have been obvious to use aluminum chloride or aluminum sulfate, and thereby arrive at the subject matter of the instant claims, because the inventors disclose that aluminum chloride or aluminum sulfate may also be used as the polyvalent metal ion source (col. 6, line 19).

7. Claims 10, 12-15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganslaw *et al.*

The discussion of the disclosures of the prior art from paragraph 5 of this office action is incorporated here by reference. The cited examples show use of aluminum acetate as the source of aluminum ion, however, it would have been obvious to one having ordinary skill in the art to use aluminum chloride or aluminum sulfate, and thereby arrive at the subject matter of the instant claims, because the inventors disclose that aluminum chloride or aluminum sulfate may also be used as the polyvalent metal ion source (col. 6, line 19). Since aluminum chloride and aluminum sulfate are disclosed to provide the same aluminum ion, one having ordinary skill in the art would have expected their use to provide essentially the same product with a reasonable expectation of success. The reference is silent regarding the recited properties, however, in view of the fact that use of aluminum chloride and aluminum sulfate would be expected to result in the same product, a reasonable basis exists to believe that the particles of Ganslaw *et al.* also exhibit the recited properties. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

8. Claims 1, 3-6, 8-11, 13-15, and 17-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mertens *et al.* (WO 00/53664; U.S. 6,620,889) for the same reasons set forth in the previous office action.

9. Claims 1, 3-6, 8-11, 13-15, and 17-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gartner *et al.* (U.S. 6,323,252) for the same reasons set forth in the previous office action.

10. Claims 1, 3-6, 8-11, 13-15, and 17-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Harada *et al.* (U.S. 5,115,011).

Harada *et al.* discloses treatment of superabsorbent particles with an aqueous solution of aluminum sulfate, followed by drying of the particles. The synthetic polymer used in the examples is prepared from 74.96 mol % of sodium acrylate, 25 mole % of acrylic acid, and 0.04 mole % of N,N'-methylenebisacrylamide (col. 6, lines 41-55). The polymer is treated with aqueous solutions comprising aluminum sulfate (examples 1, 4-8, 10, 20), aluminum chloride (examples 3, 9, 11-13, 16, 25, and 26), calcium chloride (example 14), magnesium chloride (example 15), aluminum acetate (example 27), and aluminum nitrate (example 28). In example 2, the superabsorbent polymer is a starch-acrylic acid graft polymer commercially available as SanWet IM-1000. This material is treated with an aqueous solution comprising aluminum sulfate. The reference is silent with regard to the properties recited in the instant claims, however, in view of the fact that the material is essentially the same as that described in the instant claims, a reasonable basis exists to believe that the material exhibits the essentially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

Response to Arguments

11. Applicants' arguments with respect to the rejection of claims based on Ganslaw *et al.* have been considered fully, but they are not persuasive. Applicants submit that the particles, as amended, contain a coating free of an organic solvent. The subject matter of the instant claims appears to fail in complying with the written description requirement. This point notwithstanding, the prior art appears to teach this feature since the inventors show that the final product is dried with heating (col. 10, lines 28-30). As such, coatings would be devoid of organic solvent, as claimed. Regarding the property claims, Applicants have not met their burden of proof in establishing unobviousness differences over the prior art. In light of this and previous discussion, the rejection of claims over Ganslaw *et al.* has not been withdrawn.

12. Applicants' declaration under 37 C.F.R. 1.132 has been reviewed carefully. As Applicants have the burden of proof to establish unobviousness differences over the prior art, they have carried out well-planned experiments in attempts show that materials of the prior art do not exhibit the claimed delayed free water absorption properties.

With regard to the treated superabsorbent polymer described in Mertens *et al.* and Gartner *et al.*, applicants have shown that SXM 9300 (Stockhausen) treated accordingly fail to exhibit a delayed free water absorption of less than 3.6 g/g polymer/15 sec. However, it is not clear whether the commercially available SXM 9300 is identical to the polymer of Mertens *et al.* (contains 0.7 wt % crosslinking agent) or of Gartner *et al.* (XZ 95889.01; Dow Deutschland, Inc.). This is critical since crosslinked polymer is expected to exhibit different absorption properties over non-crosslinked polymer. Applicants may submit product data sheets or another affidavit elucidating the nature of SXM 9300.

Applicants have shown cogent data establishing that the treated polymer of Cook *et al.* does not exhibit a delayed free water absorption of less than 3.6 g/g polymer/15 sec, as recited in the instant claims. Consequently, the rejection has been withdrawn.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

ral

February 6, 2007


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700